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Impact of Co-Occurring Treatment Program on Participant Perceived Quality of Life

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Abstract

The purpose of this treatment program evaluation study was to determine the impact of client perception of quality of life before and after participating in a co-occurring disorders (COD) program at a chemical dependency clinic in the northeastern United States. Quality of life was measured using the Quality of Life Survey (QOLS), a 16-question assessment, in a pre-test and post-test format. Participants in the COD program participated in both individual and group therapy utilizing Dialectical Behavior Therapy and Seeking Safety modalities. While the size of the convenience was small, improvement in perceived quality of life was shown in all QOLS domains and the overall scoring revealed a marked increase in client perception of their quality of life. The findings of this study confirm that treating co-occurring mental illness and substance use disorders in a single setting is beneficial to clients, not only helping them in their attempts to remain substance free, but improving their quality of life.

Impact of Co-Occurring Treatment Program on the Quality of Life of Participants

Whether called “co-occurring disorders”, “dual diagnosis”, or “co-morbidity,” it has been recognized that there is a high incidence of individuals manifesting both a substance use disorder (SUD) and any mental illness (AMI). It is generally accepted that adults having one mental health disorder may also have another mental disorder (Minkoff, 2000). However, the term co-occurring disorder is used exclusively for those diagnosed with both a mental health and a substance use disorder (Dual Diagnosis, 2013). To avoid confusion and to align with the most current thinking, having both AMI and SUD will be referred to as co-occurring disorders (COD) throughout this paper (“Co-occurring disorders,” n.d.; Hendrickson, 2006).

Over the past few decades, the presentation of people with both substance use and mental health disorders has increased in both mental health and substance use/chemical dependency treatment settings. Those with both mental health and substance abuse disorders have unique issues that having one or the other disorder alone does not present. With both of these disorders, there is a higher rate of relapse in both mental health and substance use (Mueser, Noordsy, Drake & Fox, 2003; O’Connell, 1998). The publication of the third edition of the Diagnostic and Statistical Manual of Mental Disorders (3rd ed., DSM–III; American Psychiatric Association, 1980) was the first that allowed for multiple diagnoses. After its publication, it was possible for people being treated in either setting (mental health or substance abuse) to have a disorder that would normally be treated in the other setting (Hendrickson, 2006).

Unfortunately for those with co-occurring disorders, treatment systems have evolved to address mental health and chemical dependence separately and in a disjointed manner. These systems are overseen by separate government agencies who have their own philosophies and

train practitioners with strategies specific to those philosophies. While the goals of substance abuse clinicians are aimed at achieving sobriety and preventing relapse, mental health practitioners use a variety of therapeutic interventions and may use pharmacology to manage client symptoms (Mueser et al., 2003).

This thesis explores the relationship between integrated treatment for co-occurring mental health and substance use disorders and the quality of life of participants. In particular, it focuses on a specific treatment program at a chemical dependency clinic. Based on the research about integrated COD treatment, it would be expected that going through an integrated program that seeks to address both substance use issues and mental health issues would have a positive impact on the participant view of their quality of life.

The COD program used in this study utilized Dialectical Behavior Therapy, which was developed for those experiencing difficulty with emotion regulation, and Seeking Safety, which was developed for use with individuals with both Post-Traumatic Stress Disorder (PTSD) and a substance use disorder. The Quality of Life Survey was used to measure participant perception of the quality of their lives before and after COD program participation. Using this instrument, clients rated their perceptions of four domains of quality of life.

This program evaluation focuses on client perception of their quality of life after participating in the co-occurring program at a local chemical dependency clinic. Quality of life as it relates to COD treatment has not been the focus of many studies thus far. While this study is small, it does point toward a connection between holistic treatment and a positive improvement in client quality of life.

Review of Literature

The topic of co-occurring disorders, its diagnosis and treatment, has been discussed in various forms of literature over the past few decades. In the following pages is a discussion of the literature relating to this issue. It will be addressed in the following way: treatment models, and treatment intervention types. In addition, the literature on quality of life assessments will be addressed.

Scope of the Problem

The National Survey on Drug Use and Health: Mental Health Findings of the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA) reported that for adults 18 years or older who were diagnosed with any mental illness, 20 percent or 9.2 million of them also met the diagnostic criteria for a substance use disorder. During that same time period, almost half of those who had substance use disorders were also diagnosed as having AMI.

Co-occurring disorders (COD) are more prevalent among men than women (4.5 percent vs. 3.5 percent). By ethnicity, American Indians/Alaskan Natives (7.7 percent) had the highest percent of COD, while Asians and Hawaiians had the lowest at 1.8 percent and 2.3 percent, respectively. Those between the ages of 18 and 25 had the highest rate of COD at 9.6 percent. The unemployed had a higher rate of COD at 8.2 percent than their full time (3.3 percent) or part time (5.4 percent) employed counterparts (Results from the 2010 National Survey on Drug Use and Health: Mental Health Findings, 2012). The high prevalence of COD in the general population around the world is not only distressing for the individual experiencing the COD, but comes at a high cost to society overall (Dickey & Azeni, 1996; Samet, Nunes, & Hasin, 2004).

Of the 9.2 million adults who had COD, about half did not seek any kind of treatment, about a third sought treatment for their mental illness only, about 3 percent sought treatment for

their substance use disorder only and around 8 percent sought treatment for both their SUD and AMI (2010 National Survey on Drug Use and Health: Mental Health Findings, 2012).

Parallel, Sequential, and Integrated Treatment

In their now outdated Treatment Improvement Plan (TIP) No. 9 (1994) SAMHSA identified three distinct approaches to treatment delivery for people with COD: sequential, parallel, and integrated. Sequential treatment involved treating the individual for each COD non-simultaneously, by two different systems (substance abuse treatment and mental health treatment), stabilizing one and then treating the other (Substance Abuse and Mental Health Services Administration, 1994; Hendrickson, 2006). As a treatment of exclusion, rather than inclusion, sequential treatment supports silo-type treatment settings, with the goal of treating and stabilizing one disorder before the other is addressed and ignoring the interactive nature of the co-occurring disorders (Mueser et al., 2003).

While still treating clients with COD in two separate treatment systems, the parallel approach has clients receiving these treatments simultaneously. However, the coordination of these treatments was inconsistent and often had the client bouncing back and forth between treatment settings (Hendrickson, 2006; The Gains Center, n.d.). Differing philosophies in each treatment setting, mental health and substance abuse, can make parallel treatment of COD confusing for the client, and often the client terminates treatment prematurely (Hendrickson, 2006; Mueser et al, 2003).

The integrated care approach, which treats clients for both mental health and substance use disorders in a single setting, offers the most potential for treatment (Drake & Mueser, 2000; Barrowclough, Haddock, Fitzsimmons, & Johnson, 2006). In the 2002 SAMHSA TIP No. 42,

integrated care was identified as the most desirable treatment option for those with COD and had the most potential for success. Integrating or coordinating the treatment of substance use and mental health disorders in a single setting is a more holistic approach to those with COD and provides a single entry point to care (SAMHSA, 2002; Mueser et al., 2003).

Integrated care overcomes some of the drawbacks of both sequential and parallel treatments and is the preferred treatment setting for those with COD (Tsuang, Fong, & Lesser, 2005). By integrating care, the need for coordination of two treatment systems is eliminated, as both disorders are treated as primary and treated simultaneously in the same setting. Shifts toward a shared perspective of COD clients mitigate therapist philosophical differences over time (Mueser et al, 2003). Integrated care has resulted in decreased hospitalizations for clients with COD as well as a reduction in the number of days spent in the hospital (Mangrum, Spence, & Lopez, 2006; Mueser et al., 2003; Tsai, Salyers, Rollins, McKasson, & Litmer, 2009).

Those clients who received integrated treatment had a reduced number of arrests as compared to their counterparts who received parallel care for their COD, whose legal involvements remained static. Reduction in both medical and legal engagements reduces the overall cost of services normally used in disproportionate amounts by those with COD (Mangrum et al., 2006).

Some of the goals in the full vision for integrated treatment for COD include a single program with clinicians that are trained in psychopathology, assessment, and treatment strategies for both mental and substance use disorders. Interventions would be client centered, with a long-term perspective, using stagewise and motivational counseling. Understanding both mental illness and substance use disorders is paramount in the assessment and diagnosis of clients for

placement in the correct treatment environment (Drake, Mercer-McFadden, Mueser, McHugo, & Bond, 1998b; SAMHSA, 2005).

Integrated behavioral treatment for those with COD has reduced the substance use of clients to a greater degree than treating just the substance use disorder alone. When treatment targets both mental health and substance use disorders, the positive outcomes increase in both areas (Weiss, Griffin, Kolodziej, Greenfield, Najavits, Daley, Hennen, 2007).

Assessment and Diagnosis

It is essential to attain a correct diagnosis so clients can achieve the entire spectrum of treatment needed. However, it is often difficult to diagnose those with COD, since there is symptom overlap between mental disorders and SUD. Those withdrawing from substances can have symptoms that appear to be mental health related (Mueser et al., 2003). Individuals with active SUD may present with symptom fluctuation which can mask symptoms of mental illness. Consequently, distinguishing between the symptoms of mental illness and substance abuse can be challenging. There is currently a dearth of instruments available to assess those with COD (Langås, Malt, & Opjordsmoen, 2011; Mueser et al., 2003). These factors make it challenging to successfully diagnose and determine the best type of treatment for an individual with COD. The choice to place clients in mental health treatment, chemical dependency treatment, or a program that addresses both can be difficult (Evans & Sullivan, 2001; Langås et al., 2011).

It is important to do a thorough screening and evaluation of the client to determine factors such as onset of symptoms of both SUD and AMI, family history, symptom persistence, and presence of symptoms during times of sobriety. Whenever possible, family members and other medical and psychological cohorts should be contacted for a fuller picture of the client. The

evaluation would be done by a counselor who is familiar with the diagnostic criteria for mental disorders, who understands that there is no single correct treatment approach, who has no preconceived notions as to the impact that SUD has on a client's mental health, who understands the treatment programs available, is willing to be transparent with the client, and understands that empathy and hope are the best tools when working with a COD client (SAMHSA, 2005).

The advent of screening tools like the Dartmouth Assessment of Lifestyle Instrument (DALI) and the Psychiatric Research Interview for Substance and Mental Disorders (PRISM), along with the distinctions in the DSM-IV TR (4th ed., text rev.; DSM-IV-TR; American Psychiatric Association, 2000) between mental disorders and substance induced mental disorders, have been useful in ascertaining whether the client is experiencing COD, and not experiencing mental health issues precipitated by substance use (Drake & Mueser, 2000; Samet et al., 2004; Valborg, Samet, Johnsen, Bramness, & Waal, 2013). Clients presenting with mental health issues should not only be screened for current SUD, but for lifetime SUD, since many may be more likely to admit to past versus current use of substances (Barry, Flemming, Greenley, Widlak, Kropp, & McKee, 1995).

When assessing a client for COD, as with assessment for MHI and SUD in general, it is important to consider the clients' cultural background. Some mental illnesses may be over diagnosed for certain ethnic groups based on the assessors own cultural norms. Some clients may not perceive their substance use as a problem based on their own cultural views of alcohol and drug use (SAMHSA, 2005). Expanding the cultural knowledge of the assessor is important for COD to be diagnosed correctly in an ethnically diverse population (Center for Mental Health Services, 2001). Therefore, understanding the culture of the client being diagnosed is an important part of a proper assessment for clients with COD (SAMHSA, 2005).

Stage-Wise Case Management

Stage-wise treatment is intended to deliver appropriate interventions and set goals appropriate to the client's stage of treatment (Drake & Mueser, 2000; Mueser et al., 2003). Counselor goals may outpace the stage of readiness of the client (Mueser et al. 2003). Delivering a well-intended intervention at the wrong stage of treatment may derail its intent. The stages of therapy include: engagement, persuasion, active, and relapse prevention ("Stage-Wise Treatment", n.d.).

The goal of the engagement stage is to establish the therapeutic alliance, take a non-judgmental stance, instill hope through counselor transparency and honesty, establish regular contact with the client, and help the client meet their basic needs (Drake & Mueser, 2000; Mueser et al., 2003). At this stage clients are often unwilling to admit to having a problem and establishing the therapist-client relationship is paramount ("Stage-Wise Treatment", n.d.).

Once the therapeutic alliance has been established, the client enters the persuasion stage, where the client has a very small investment in change (Drake & Mueser, 2000), has regular contact with their counselor, and is more willing to hear how their mental illness or substance use disorder has negatively impacted them and those around them (Drake & Mueser, 2000; Mueser et al., 2003). At this stage, the counselor and client are aligned against the disease and goals for recovery are established (Mueser et al., 2003). During this time, assessment continues and the counselor may meet with family and friends ("Stage-Wise Treatment", n.d.).

Once a client has moved to the active treatment stage, they demonstrate a willingness to take steps to reduce their mental health or substance use disorder. This is the stage where the client is motivated to change their behavior and is working with the counselor to achieve the

goals that were set (Drake & Mueser, 2000; Mueser et al., 2003). Relapses are viewed as a common part of recovery and not as failures while periods of success are celebrated (Mueser et al., 2003). In the relapse prevention stage, clients are motivated to maintain their commitment to sobriety and mental health and are further encouraged to work on other areas of their lives (Drake & Mueser, 2000; Mueser et al., 2003).

Treatment interventions, when applied at the appropriate stage, can be effective when working with clients with co-occurring disorders, supporting rehabilitation and recovery (Mueser et al., 20006). Programs that include motivational interviewing (MI), Cognitive Behavioral Therapy (CBT), and social-skills training, along with case management and 12-step programs, have been recognized to be successful with the COD population in both individual and group settings (Horsfall, Cleary, Hunt, & Walter, 2009). For purposes of this review, the CBT-informed therapies of DBT and Seeking Safety will be discussed.

Treatment Interventions

People with COD generally present with more distortions in cognition and deficit in coping skills than those with singular diagnoses. Consequently, CBT and those therapies based on CBT, is one of the recommended therapeutic interventions for those with COD. CBT emphasizes skill acquisition while teaching clients how to cope with their emotions and deal with the problems of life (Najavits, 2004).

Dialectical behavior therapy (DBT), a CBT-based therapy, has demonstrated measurable improvement in emotion regulation of those with co-occurring bipolar disorder (BPD) and substance use disorders, which has contributed to decreased substance use, therapy retention, and improvements in social adjustment (Axelrod, Perepletchikova, Holtzman, & Sinha, 2011;

Linehan, Schmidt, Dimeff, Craft, Kanter, & Comtois, 1999). There is also increasing evidence that the Seeking Safety program, which also incorporates CBT, has an impact on the success of clients with co-occurring PTSD and substance use disorders (Searcy & Lipps, 2012).

Dialectical Behavior Therapy (DBT).

Dialectical Behavior Therapy (DBT), a CBT-based therapy, was first developed by Marsha Linehan in the 1990s to treat clients with borderline personality disorders (BPD) and a history of chronic parasuicidal behavior. A dialectical balance between change and acceptance is at the core of DBT. Clients were often non-compliant when faced with a strong focus on changing their thoughts and emotions, which they often viewed as invalidating and insurmountable (Linehan, 1993). The ultimate goal of DBT is for the client to move toward a life worth living, rather than merely symptom reduction (Dimeff & Linehan, 2008).

The precepts of DBT are greatly influenced by eastern Zen principles of acceptance (Linehan, 1993). DBT focuses on balancing and understanding both acceptance and change (Lynch, Chapman, Rosenthal, Kuo, & Linehan, 2006). DBT is comprised of four modules: Mindfulness, Distress Tolerance, Interpersonal Effectiveness and Emotion Regulation. Common to all of these skills is the use of mindful observation, in the moment, nonjudgmentally (Linehan, 1993; Swales, 2009).

Mindfulness skills are the “what and how” skills that teach how to fully participate in life, with awareness, taking a nonjudgmental stance. It is being in the moment while observing, describing, and participating. Participation without awareness is thought to contribute to the impulsive behaviors of BPD (Linehan, 1993).

Radical acceptance, enabling the client to accept life the way it is and not the way they think it should be, is the goal of the teaching Distress Tolerance. Since distress is part of life and cannot be avoided, these DBT skills are focused on acceptance of life at the moment and developing skills so that inevitable life crises can be tolerated (Linehan, 1993).

The key to mental health is the ability to regulate emotional responses to stimuli. Clients often view their painful experiences as problems to solve and the solution is often substance abuse or self-harm. The DBT Emotion Regulation module addresses this by asking the client to identify and put a name to the emotion they are feeling nonjudgmentally, identify the function of the emotion, and move out of their emotion mind, the part of the brain that reacts without thinking (Linehan, 1993).

The focus of the Interpersonal Effectiveness module is teaching skills that will help enhance and manage relationships. These skills help the client learn to say no, ask for what he or she needs, and help the client learn to cope with conflict (Linehan, 1993).

While DBT was originally created to address the specific problems for those suffering from BPD and suicidal and parasuicidal ideation, DBT has application with those clients who have substance use disorders that can be attributed to emotional dysregulation (Dimeff & Linehan, 2008). However, addressing clients' substance use disorder is the first DBT target when working with a client with COD, since it has an immediate impact on quality of life. Other targets include: decreasing any substance use, controlling symptoms of withdrawal, monitoring and mitigating cravings, identifying and helping to limit internal and external triggers, encouraging new non-substance related behaviors, and identifying and reducing behaviors that lead to drug use. While substance abstinence is the goal of DBT, it is acknowledged that relapses

happen and they do not signal failure or inadequacy. If relapses occur, the client and therapist analyze the events surrounding the relapse, and identify skills that can be used to mitigate relapse in the future (Dimeff & Linehan, 2008).

Seeking Safety.

Lifetime occurrence of PTSD in those who have sought treatment for a SUD is estimated to be around 50% (Back, Waldrop, & Brady, 2009; Brady, Back, & Coffey, 2004). Among clients with co-occurring PTSD and SUD there is a poorer treatment outcome, including higher rates of hospitalization and continued substance use (Najavits, Weiss, Shaw, & Muenz, 1998). Co-occurring PTSD and SUD have a more complicated presentation and most often those with this type of COD seek treatment in a SUD setting where their PTSD symptoms are not addressed. This may be because exposure therapy is the most often employed therapy for PTSD and it is avoided in SUD treatment settings because it is thought to be counterproductive to maintaining abstinence (Back et al., 2009). Data indicate that clients with PTSD and co-occurring SUD may be at risk for other types of mental health disorders which can impact outcomes (Read, Brown, & Kahler, 2004).

Seeking Safety (SS) is a manual-based, 25-session integrated CBT therapy for clients with co-occurring post-traumatic stress (PTSD) and substance use disorders. It is divided into four content areas: cognitive, behavioral, interpersonal skills, and case management. The goal of SS is to help clients attain safety in many areas of their lives including relationships, thinking, emotions and behaviors. (Najavits, 2002).

Seeking Safety is currently the only therapy model specifically targeting co-occurring PTSD and SUD (Norman, Wilkins, Tapert, Lang, & Najavits, 2010). Teaching safe coping skills

is the goal of SS therapy and as a first-stage therapy it allows clients to reduce their PTSD and substance abuse symptoms and prepares the client for subsequent trauma-based therapies (Cook, Walser, Kane, Ruzek, & Woody, 2006; Najavits, 2002).

Seeking Safety can be used in both individual and group sessions, with men and women, and in a variety of settings (i.e. inpatient, outpatient). The modules can be presented in any order, can be completed in one or more sessions, and it is not necessary to use all of the modules to complete the program. These factors allow for client-centered customization of the treatment. All of the modules focus on applying the topic covered to the discussion with client or clients about issues specifically related to their circumstances. Each module begins with a quote relevant to the topic for discussion and ends with homework, called a commitment, to be completed for the next session (Najavits, 2002).

While Seeking Safety was designed for co-occurring PTSD and SUD, it is unnecessary for clients to meet the full criteria for either to benefit from this program. For example, clients who have experienced trauma of any kind without a formal diagnosis of PTSD have also said they felt that SS was relevant to them. Those with other co-occurring mental health illness have benefited from SS as well (Najavits, 2002).

Seeking Safety's initial pilot study found that in a population of 27 women with trauma and current SUD the 17 women who completed the program were found to have decreases in symptoms in many significant areas including: trauma related symptoms, substance use, and suicidality (Najavits, 2002; Najavits et al., 1998). Seeking Safety has also been evaluated in a variety of settings, a women's prison, a battered women's shelter, and an all-male veterans population in a Veteran's Administration setting. Each of these studies has shown some benefit

from participation in the SS program, with some significant improvement in both trauma and SUD symptoms (Cook et al., 2006; Hien, Cohen, Litt, Miele, & Capstick, 2004; Johnson, Zlotnick, & Perez, 2011; Zlotnick, Najavits, Rohsenhow, & Johnson, 2003).

Both DB T and Seeking Safety therapies have been proven to relieve symptoms of mental illness and substance use disorders. By lessening these symptoms these therapies improve the quality of life of clients with co-occurring disorders (Lopez & Chessick, 2013).

Quality of Life

Those with co-occurring disorders have been found to have a lesser quality of life and require services that address their higher impairment (Benaiges et al., 2012; Urbanoski, Cairney, Adlaf, & Rush, 2007). In studies comparing the QoL of individuals with COD with individuals with singular mental health or substance use disorders, those with COD had a lower QoL than those in either of the other groups (Benaiges et al., 2012; Singh, Mattoo, Sharan, & Basu, 2005).

Quality of Life (QoL) has attracted a great deal of attention over the years; however, when reviewing the literature, it is apparent that there is no definitive consensus definition (Benaiges, Prat, & Adan, 2012; Gigantesco & Giulliani, 2011; Olatunji, Cisler, & Tolin, 2007). While researching impact on QoL, much of the literature does not attempt to define QoL and merely accept the World Health Organization (WHO) definition of QoL (WHOQOL Group, 1995) as:

individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad ranging concept affected in a complex way by the person's

physical health, psychological state, level of independence, social relationships, personal beliefs and their relationship to salient features of their environment (p. 1405).

Revicki, Osaba, Fairclough, Barofsky, Berzon, Leidy, and Rothman (2000) view QoL as individual and “related to one’s overall well-being” (p. 888). An individual’s QoL is directly related to that individual’s expectations for their life and perceptions of their environment across physical, psychological, and social domains. Different interpretations and definitions of QoL will lead to different decisions on many important topics (Revicki et al., 2000). While the meaning of QoL is open to interpretation, it has become the desired outcome of service delivery in a wide variety of disciplines (Barcaccia, Esposito, Matarese, Bertolaso, Elvira, & De Marinis, 2013).

Culture cannot be ignored when trying to define the term QoL. It has a direct influence on perceptions of “health and sickness, interpretations of symptoms, the meaning of QoL and expectations of care” (Kagawa-Singer, Padilla, & Ashing-Giwa, 2010, p 62). The contextual model of health-related QoL proposed by Ashing-Giwa (2005) requires viewing health-related QoL within a social-ecological and cultural context. Ashing-Giwa (2005) describes this model as a “comprehensive theoretical framework to facilitate culturally and socioecologically responsive research” (p. 297).

Measurement Tool – Quality of Life Survey (QOLS)

Since QoL is an individual perception influenced by many factors, it is important to use a QoL assessment tool completed by clients that is valid and reliable, such as the Quality of Life Scale (QOLS). The QOLS was created in the 1970s by John Flanagan and originally contained 15 questions. To determine the requirements for quality of life, a large multicultural and regionally diverse population of 3,000 was sampled with 6,500 critical incidents to determine as

many factors as possible that contribute to overall QoL (Burckhardt & Anderson, 2003; Flanagan, 1978). This original QOLS contained 15 questions from 5 conceptual domains which included material and physical well-being; relationships with other people; social, community, and civic activities; personal development and fulfillment; and recreation (Flanagan, 1978).

In later years, the QOLS was adapted for use with individuals with chronic diseases and a 16th question was added to the assessment that addressed independence and doing for oneself, in addition to the original 15 questions originally developed by Flanagan (Burckhardt & Anderson, 2003; Flanagan, 1978). The QOLS has been used by researchers to determine QoL for individuals with many different illnesses, including individuals with PTSD (Burckhardt & Anderson, 2003).

The existing literature indicates that those individuals with COD have a much lower quality of life overall, lower than those who experience either substance use or mental health disorders alone. The need for individualized, integrated care for people with COD is supported in the review of the literature available.

While there is much research on the impact of integrated care for clients with COD and how it impacts factors like frequency of hospitalization, number of hospital days spent, legal consequences and use of services, the impact of individualized care on quality of life for those with COD receiving integrated care has had little research. The goal of this research is to fill that gap by determining when the therapies described herein impact the QoL of those with COD.

Method

Using a quantitative one-group pre-test/post-test design, this research seeks to determine, using descriptive statistics and paired *t*-tests, if a particular program that treats individuals with

co-occurring mental illness and substance use disorders (COD) has a statistically significant ($\alpha = .05$) impact on participant perception of quality of life. As defined by the 16-question Burckhardt Quality of Life Survey (QOLS), the instrument used in this study, quality of life is comprised of six conceptual quality of life domains, including: material and physical well-being; relationships with other people; social, community and civic activities; personal development and fulfillment; recreation; and independence. Study participants were administered a pre-test and post-test to derive QoL scores over the course of their program participation. This section will include information about the participants chosen for the research, the materials used, and the procedure by which the research design was performed.

Participants

This study included 12 adults ($n = 9$ males, $n = 3$ females) in a treatment program for clients with co-occurring mental health and substance use disorders (COD) located at a small suburban chemical dependency clinic in northeastern United States. Analyzing this particular group required the use of a convenience sampling. The sample included individuals with a variety of primary mental health diagnoses (58.3% Anxiety, 25% Depression, 8.3% PTSD, and 8.3% Bipolar) and substance abuse dependence diagnoses (66.7% Alcohol, 16.7% Opiates, 8.3% Cocaine, and 8.3% Cannabis). The sample included participants that were predominantly Caucasian (91.7% Caucasian and 8.3% Hispanic), which was generally representative of the overall ethnic diversity of the clinic. Ages ranged between 20 and 57 ($M = 38.83$ years). The entire group of participants identified as either never married ($n = 7$) or divorced ($n = 5$). There was one veteran involved in the study. The majority of the participants in this study were unemployed (66.7% unemployed, 8.3% student, 25% employed part-time, 0% employed fulltime). Education levels varied among group participants with the majority reporting having

attended college (25% high school diploma or GED, 25% some college, and 50% college degree). A majority of the COD participants were self-referred, seeking help voluntarily ($n = 8$) with the rest referred to the agency by the legal system ($n = 4$). Participants in this study participated in the COD program from 30 therapeutic hours to 93 therapeutic hours ($M = 68$ therapeutic hours).

Previous chemical dependency treatment was reported for 91.7% of participants. Five participants (41.7% participants) are currently receiving mental health treatment at a separate facility along with their participation in the COD group.

Four participants successfully completed and were discharged from the program and seven participants remained in treatment. One participant left the program against medical advice due to loss of contact over 30 days, but had completed a 50-therapeutic-hour survey before leaving the program, which was included in this study as his completed post-test.

Measures

Participant perception of their quality of life was measured by administering the Quality of Life Survey (QOLS) (Burckhardt & Anderson, 2003) to participants within two weeks of their involvement in the COD group, at approximately 50 therapeutic hour intervals, and again at the end of treatment. The QOLS is a 16-question instrument that uses a Likert-type scale with rankings labeled *Delighted*, *Pleased*, *Mostly Satisfied*, *Mixed*, *Mostly Dissatisfied*, *Unhappy*, and *Terrible*. The ability to measure the quality of life from the client's perspective, which directly addressed the research question, was the main factor in the selection of this instrument. A total score representing perception of quality of life is obtained by summing the items. Clients are asked to answer all questions, even if the item does not appear to be related to their lives. For

example, it was explained to participants that they could be happy with not having a job as well as unhappy about having a job. The entire QOLS can be found in Appendix A.

The QOLS was administered via paper and pencil before or after the COD group meeting. No other materials were used for this study.

Procedure

Participants were recruited over a six-month period from clients participating in a COD program at a CD Clinic. Referrals to the COD program were given to individuals who had both a mental health and chemical dependency diagnosis. Clients were evaluated at their first appointment by a clinic evaluator who determined the client's appropriateness for the COD program based on a previous mental health diagnosis and the current substance use. All clients referred to and participating in the COD program were given the opportunity to participate in this study and completed a consent and pre-test assessment; however, only 63.1% of COD clients fully participated by completing the post-test assessment over the six-month period. Of those that did not participate, two were referred to other agencies and five left the program voluntarily. Clients in this program began in the COD Early Recovery Program (COD-ERS) with some moving to the Advanced Recovery Program (COD-ARS) after a period of time determined by their progress and length of sobriety.

The COD-ERS included a structured group that met three times per week. Two group sessions were dedicated to learning and reinforcing DBT skills with the Seeking Safety program being used one time per week. The COD-ARS program included one structured group session per week focused mainly on DBT skills. Both programs required participants to attend individual

(1-on-1) sessions once every week or every other week. Mindfulness (i.e. meditation, mindful breathing, and mindful eating) was a component of every group regardless of level of care.

Completed surveys were filed in the client medical chart, along with signed consent forms, and stored in the clinic's record room under double lock. When compiling the data, the surveys were photocopied, coded for pairing pre- and post-tests, and de-identified. The complete participant consent form, which outlines in more detail the measures taken to ensure client confidentiality, can be found in Appendix B.

Results

Descriptive statistics and paired sample *t*-tests were used to gain an understanding about client perception of the impact on quality of life as measured by the Quality of Life Survey (QOLS) before and after participating in this COD program. The pre-test and post-test means were calculated for all questions on the survey and for the total pre-test and post-test scores. They are listed in Table 1 below.

Table 1. Comparative Means by Questions

Questions (Domain)	Pre-Test		Post-Test	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Describe how satisfied you are at this time with: (n = 12)				
1. Material comforts of home, food convenience, financial security	4.250	1.712	4.920	1.564
2. Health – being physically fit and vigorous	3.580	1.443	4.330	1.723
3. Relationship with parents, siblings and other relatives - communicating, visiting, and helping	5.580	1.379	5.920	0.996

4. Having and rearing children	4.670	2.270	5.750	1.763
5. Close relationships with spouse or significant others	3.920	1.676	4.830	2.038
6. Close friends	4.420	2.021	4.920	1.881
7. Helping and encouraging others, volunteering, giving advice	4.750	1.357	5.580	1.564
8. Participating in organizations and public affairs	4.000	1.414	5.000	1.651
9. Learning - attending school, improving understanding, getting additional knowledge	4.500	2.023	5.420	1.621
10. Understanding yourself – knowing your assets and limitations – knowing what life is about	4.920	0.995	5.080	1.379
11. Work – job or home	3.170	1.586	4.750	1.960
12. Expressing yourself	4.670	1.303	5.830	1.193
13. Socializing – meeting other people, doing things, parties, etc.	3.750	1.545	5.000	1.537
14. Reading, listening to music, or observing Entertainment	5.580	1.240	5.750	1.603
15. Participating in active recreation	4.080	1.505	5.170	1.586
16. Independence, doing for yourself	4.080	1.564	5.500	1.624
Total scores	69.92	11.719	83.834	20.203

Table 1 shows that when comparing the means, the post-test mean for each question is higher than the pre-test means. The same trend is reflected in the overall total of pre-test versus post-test means. Question 12, which asks how the participant rates satisfaction with creative

expression, showed the largest increase, with a difference of 1.16. Question 14 showed the smallest pre-test to post-test change. However, the pre-test mean for question 14 was 5.58, which means that overall most participants were satisfied with this area even before treatment.

A paired t-test of pre-test and post-test QoL totals revealed a significant difference in the pre-test QoL scores and QoL post-test scores ($t(11) = 2.265$, $p = .014$). Specifically, these results suggest that participating in this COD program had an impact on the client perception of quality of life as measured by the QOLS.

Table 2 shows the paired t-test means for the QOLS by domain. Domains 2 ($t[11] = 2.333$, $p = .033$), 3 ($t[11] = 1.833$, $p = .052$), and 4 ($t[11] = 3.833$, $p = .015$), all showed significant differences between pre-test and post-test means that would suggest that the COD program had an impact on these domains. A paired t-test of pre-test and post-test QoL revealed a difference in domains 1 and 5 pre-test score and post-test scores; however, the differences were not statistically significant.

Table 2. Comparative means by Domains		Pre-Test		Post-Test	
Conceptual Domains (Question #s)	(n = 12)	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1. Material and Physical Well-being (Q1, Q2)		7.830	2.598	9.250	2.657
2. Relationships with Other People (Q3, Q4, Q5, Q6)		18.58	4.358	20.920	4.757
3. Social, Community, and Civic Activity (Q7, Q8)		8.750	2.221	10.58	3.147
4. Personal Development and Fulfillment (Q9,Q10,Q11,Q12)		17.250	3.223	21.080	5.351
5. Recreation (Q13, Q14, Q15)		13.42	4.252	15.92	3.397

Table 3 below shows the total responses to the survey by scale. It shows that there is an overall trend toward a client perception of their improved quality of life.

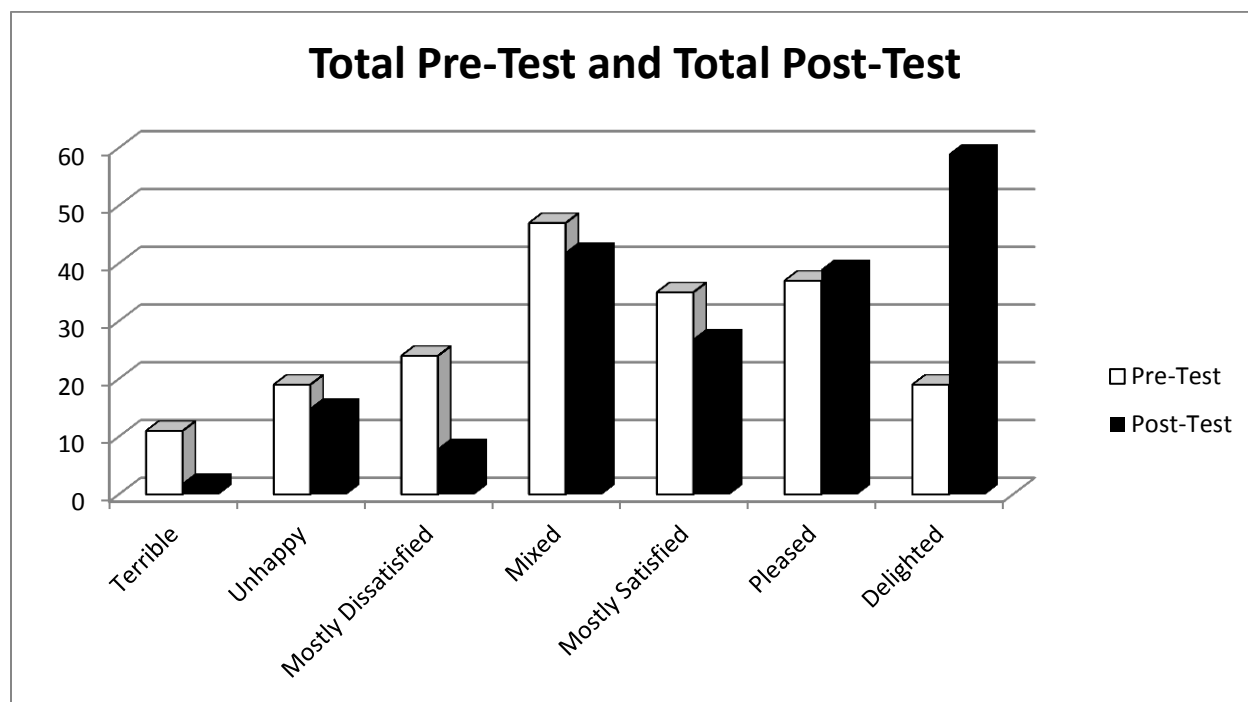


Table 3. All responses to all QOLS questions

Table 3 shows that in total those that were pleased or delighted with their QoL increased, while those who found their QoL terrible, or were unhappy, mostly dissatisfied, mixed, and mostly satisfied decreased. Both tables 1 and 3 would suggest that there was an increase in the QoL of those participating in the COD program.

Discussion

The purpose of this study was to determine if participation in a particular COD program had an impact on participant quality of life as measured by the QOLS assessment tool. This COD program focused on the interaction of mental illness and substance use disorders, using the CBT based modalities DBT and Seeking Safety. These therapeutic modalities were aimed at reducing

negative and self-defeating thoughts and behaviors that distort the client's view of the world and lead to substance use and emotional disturbances.

Twelve participants in the COD program with co-occurring mental illness and substance use disorders participated in this study and completed a pre-test and post-test, 16-question, quality of life assessment. All 12 individual participants improved or stayed the same on 12 of the 16 questions. The findings in this study are consistent with the current literature that avers that treating both mental illness and substance use disorders together results in an improved quality of life (SAMHSA, n.d.; Urbanosk et. al., 2007).

Findings

Results showed an overall increase in perception of QoL between pre-test and post-test. While 100% of participants increased in all domains, Domain Four, Personal Development and Fulfillment, had the most increase from pre-test to post-test. This domain included questions about learning, self-understanding, work, and creative expression.

Specifically, within Domain 4 (questions 9 through 12), there was a marked increase in client perception of "satisfaction with work, job, or home" and "creativity". Case management may be a contributor to satisfaction in work, job, or home, since many clients sought and were able to move toward stabilizing their income and housing situations. An increase in satisfaction with creativity may be attributed to the integration of art activities into the group experience. Drawing exercises were used in 20 hours of group, where clients were asked to draw things like their "addiction monster" or "how they were feeling" and processing their experience with the group. Mindfulness activities were always a part of the group experience and may have

contributed to increased satisfaction in this area, by encouraging the clients to stay in the moment non-judgmentally.

The fifth domain (questions 13 through 15), which covers the area of recreation, showed the second most improvement. This domain represents socializing and meeting people, reading, listening to music, and participating in recreational activities. The increase in this domain may have been impacted by group mindfulness exercises that taught participants to stay in the moment and appreciate what is happening without judgment. Some activities that were given as homework for group included taking a mindful nature walk.

Domain 2 (questions 3 through 6) showed the next most improvement, covering questions about relationships with other people. Acquiring the DBT skills of emotion regulation, where clients learned how to understand how their emotions work, and acquiring skills they need to manage their emotions instead of being managed by them. This is designed to reduce how vulnerable clients feel to negative emotions and assist them in building positive emotional experiences. DBT interpersonal effectiveness skills, which help clients maintain effective relationships, empower them to ask for what they want, and help them maintain self-respect, may have contributed to increased satisfaction with interpersonal relationships.

While still showing an improvement, the least improvement was in domain 1 (questions 1 and 2). This domain covers material and physical well-being, with questions about “material comforts of home food convenience and financial security” and “health – being physically fit and vigorous.” Many program participants experienced the negative physical effects of substance use and while clients did maintain periods of sobriety during the course of treatment, the impact on their physical self may not have been dramatically noticeable to them.

Some of the clients' comments, heard by the researcher during the course of the COD program, included client appreciation for being seen as a whole person. Clients commented that they learned things about the interaction and interplay between their mental illness and substance use that they had not previously known. Clients expressed relief that they were not just "weak" or "lacking in self-control."

Limitations

The limitations of this study included sample size. The level of attrition in this study was relatively high, with 45% of those invited to participate not completing the post-test assessment. This was due to either being referred to another program or because of loss of contact.

Another potential limitation of this study was the assessment tool, which required individuals to consider their happiness about not having something. While this was explained in both the instructions on the assessment and aloud by the researcher, questions such as "Having and Rearing Children" and "Close Relationship with Spouse or Significant Others" confused some participants. This was observed by the researcher to be a challenge to some of the participants. Some of them said "I don't have children" or "I am not in a relationship, so I put down a 1."

Results of this study may have been skewed by the lack of control over study participants receiving concurrent mental health treatment at another location (41.7%). Due to client lack of access to a psychiatrist at the COD program clinic, participants were often encouraged to seek psychiatric mental health services outside of the COD program. Oftentimes, a prerequisite of engagement in mental health counseling services was required before the client could schedule an appointment with psychiatry.

Recommendations for Future Study

While this study showed that using DBT and Seeking Safety in a specific COD program improved the client quality of life, the small study size made it difficult to apply the findings to larger populations. While the research supports that co-occurring programs are the preferred treatment method for those with co-occurring mental illness and substance use disorders (Tsuang, Fong, & Lesser, 2005), there is little research about how exactly that treatment will be delivered. Future research should include a larger sample and more clearly defined, controlled, and repeatable interventions methods, such as a prescribed number of DBT treatment hours.

As this study sample represented a variety of co-occurring mental illness and substance use issues, in which participants manifested an overall improvement in quality of life, another area for future study would be recruiting from populations with specific combinations of co-occurring disorders (e.g. depression and heroin addiction). This would allow for more targeted therapeutic and psychoeducational interventions and may reveal a difference between outcomes of different co-occurring disorders.

Culture has a large impact on quality of life perception, because quality of life is viewed through a cultural lens (Kagawa-Singer, Padilla, & Ashing-Giwa, 2010). Since the sample for this study was predominantly Caucasian (97%), it would be useful to study a more varied and representative sample.

Conclusion

While the scope of this study makes it difficult to know specifically what caused the overall increase in participant quality of life, this co-occurring program showed a strong relationship between participation in this program and increased participant perception of quality

of life. Addressing both mental health and substance use issues, showing clients the interaction between them, and not forcing clients to attend separate programs, was shown to have a positive effect on the client quality of life. Agencies would be wise to continue the trend toward implementing more single-setting treatment programs which view the client as a whole, providing a single entry point of care, and catering the treatment protocols toward addressing client mental health and substance use disorders needs together.

The literature supports that integrating care is the desired care setting for those with COD (Drake & Mueser, 2000; Barrowclough, Haddock, Fitzsimmons, & Johnson, 2006). While this study does not seek to compare COD programs to traditional substance abuse and mental health programs, it is clear from the results that being treated in a COD program positively impacted participant quality of life.

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Appendix A

INSTRUCTIONS FOR SCORING THE QUALITY OF LIFE SCALE

This form of the Quality of Life Scale (QOLS) has 16 items rather than the 15 found in the original Flanagan version. Item #16, "Independence, doing for yourself" was added after a qualitative study indicated that the instrument had content validity in chronic illness groups but that it needed an item that reflected the importance to these people of remaining independent and able to care for themselves.

The instrument is scored by summing the items to make a total score. Subjects should be encouraged to fill out every item even if they are not currently engaged in it. (e.g. they can be satisfied even if they do not currently participate in organizations. Or they can be satisfied about not having children.) Missing data can be treated by entering the mean score for the item.

If you wish to compare scores in your groups with any scores that have been published, please be aware that most of the Burckhardt references published so far use the 15 item scale. More recent and forthcoming publications all use the 16 item scale. So be sure to check the methods section of the reference before comparing your means to published ones.

If you have further questions, please write to me or call.

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QUALITY OF LIFE SCALE (QOLS)

Code _____

Please read each item and circle the number that best describes how satisfied you are at this time. Please answer each item even if you do not currently participate in an activity or have a relationship. You can be satisfied or dissatisfied with not doing the activity or having the relationship.		Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Dissatisfied	Unhappy	Terrible
1	Material comforts home, food, conveniences, financial security	7	6	5	4	3	2	1
2	Health - being physically fit and vigorous	7	6	5	4	3	2	1
3	Relationships with parents, siblings & other relatives - communicating, visiting helping	7	6	5	4	3	2	1
4	Having and rearing children	7	6	5	4	3	2	1
5	Close relationships with spouse or significant other	7	6	5	4	3	2	1
6	Close friends	7	6	5	4	3	2	1
7	Helping and encouraging others, volunteering, giving advice	7	6	5	4	3	2	1
8	Participating in organizations and public affairs	7	6	5	4	3	2	1
9	Learning - attending school, improving understanding, getting additional knowledge	7	6	5	4	3	2	1
10	Understanding yourself - knowing your assets and limitations - knowing what life is about	7	6	5	4	3	2	1
11	Work - job or in home	7	6	5	4	3	2	1
12	Expressing yourself creatively	7	6	5	4	3	2	1
13	Socializing - meeting other people, doing things, parties, etc.	7	6	5	4	3	2	1
14	Reading, listening to music, or observing entertainment	7	6	5	4	3	2	1
15	Participating in active recreation	7	6	5	4	3	2	1
16	Independence, doing for yourself	7	6	5	4	3	2	1

Confidential

10/29/2013

Appendix B

You are invited to participate in a program evaluation conducted by Randi G. Barrell, from The College at Brockport, Department of Counselor Education, at [REDACTED].

WHAT THE STUDY IS ABOUT

I hope to learn how participating in the Co-Occurring Disorders (COD) Program impacts your recovery and the quality of your life. You were selected as a possible participant in this study because you are currently a participant in the COD Program.

WHAT YOU ARE BEING ASKED TO DO

If you decide to participate, you will be asked to complete a questionnaire which will assess your perception of the quality of your life. You will be asked to complete this written questionnaire at the beginning of your participation in the COD Program, and again either when you end your participation in the COD Program or at the time this evaluation ends. You will also be asked to complete the assessment at intervals of 50 treatment hours, which is determined by adding the number of hours you participate in group, individual, or conjoint counseling sessions. In addition, demographic information, treatment history, and assessments from your medical records will be included in this study.

HOW YOUR INFORMATION IS KEPT CONFIDENTIAL

Subject identities will be kept confidential by removing any identifying information on the questionnaire. Questionnaires will be coded and the coding system information will be kept locked at [REDACTED]. All coded forms (those with no identifying data) will be kept in a locked file cabinet at the study coordinator residence and all forms will be destroyed 30 days after the evaluation has been completed.

BENEFITS AND RISKS OF PARTICIPATION

There are no anticipated benefits to you as a participant. The data collected for this evaluation are being used as part of a student project and are solely for use as an educational tool.

There is a small risk of breach of confidentiality which is being minimized by the procedures described in the section above entitled "How Your Information is Being Kept Confidential."

There are no costs incurred by you as a participant and no one involved in this study is being compensated in any way.

COMPENSATION FOR INJURY

No financial compensation will be made to cover lost earnings, or impairment of your ability to earn, as a result of any physical injury resulting from or solely due to your participation in this study [REDACTED] or the study coordinator do not assume any responsibility of injuries occurring during your travel to and from the study site

TAKING PART IS VOLUNTARY

Your participation is voluntary. Your decision whether or not to participate in this evaluation will not affect your relationship with [REDACTED] or your participation in the COD Program or any group at [REDACTED]. If you decide to participate, you are free to withdraw your consent and discontinue participation at any time without penalty and continue to remain a participant in the COD Program.

IF YOU HAVE ANY QUESTIONS

If you have any questions about the study, please feel free to contact Randi Barrell at 585.723.7736 or at [REDACTED] or contact my Brockport College faculty advisor Patricia Goodspeed-Grant at 585.395.5493 or pgoodspe@brockport.edu. You will be offered a copy of this form to keep.

If you have any questions about your rights as a research subject, you may contact the Office of the Institutional Review Board at [REDACTED], Monday thru Friday 8:15am to 5:00pm.

STATEMENT OF CONSENT

Your signature indicates that you have read and understand the information provided above, that you willingly agree to participate, that you may withdraw your consent at any time and discontinue participation without penalty, that you will receive a copy of this form, and that you are not waiving any legal claims.

Participant Signature: _____ **Date:** _____

Witness Signature: _____ **Date:** _____